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10/777,074	02/13/2004	Nam-il Kim	45822	4137

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EXAMINER

PRABHAKHER, PRITHAM DAVID

ART UNIT	PAPER NUMBER
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2622

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/777,074

Applicant(s)

KIM, NAM-IL

Examiner

Pritham Prabhakher

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 8-9, 15-19, 21, 23-25 is/are rejected.
- 7) ☒ Claim(s) 5-7, 10-14, 20 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date See Continuation Sheet.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :07/18/2005, 12/03/04, and 02/06/07.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 23-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Shibata et al. (US Pub No.: 20001/0004269A1)

*In regard to **Claim 1**, Shibata et al. teach of a hinge apparatus for rotatably connecting a housing (20 in Figure 1) with respect to a main body (10 in Figure 1) of an image photographing apparatus (Figure 1 shows the entire image photographing apparatus) providing rotation of the housing (Housing (flip unit 20) can rotate, **Figure 1 and Paragraph 0202**) in a predetermined rotation range, wherein the hinge apparatus comprises:*

*a fixing bracket secured to the main body (Shutting axis 31 (fixing bracket) is secured to the main body, **Figure 1 and Paragraphs 0202-0203**);*

*a hinge unit secured to the housing (A hinge unit is present that houses shaft 32, Figure 3), and connected to the fixing bracket to be reciprocatingly rotatable within a predetermined angle (Shaft 32 connects the hinge unit to the fixing bracket (31) and enables it to be rotatable within a predetermined range/angle, **Figures 1 and 3 and Figure 14** shows the different angles it can be rotated) ;*

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*a shaft member for rotatably connecting the hinge unit and the fixing bracket so that the hinge unit and the fixing bracket can rotate with respect to each other (Shaft (rotation axis 32) is present for connecting the hinge unit found on the housing 20 to the fixing bracket 31. This enables the hinge unit and the fixing bracket to rotate with respect to each other, **Paragraph 0203 and Figures 1-3**); and*

*a sensing unit (axial unit sensor 55) disposed on at least one of the hinge unit and the fixing bracket to sense the relative rotational range of the hinge unit with respect to the fixing bracket (Axial unit sensor 55 (sensing unit) is disposed in photographing apparatus that senses/detects the direction (rotational range) of the hinge unit found in the flip unit 20 and the fixing bracket found in the main unit 10, **Paragraph 0209**).*

*Regarding **Claim 23**, Shibata et al. teach of the hinge apparatus for rotatably connecting a housing with respect to a main body of an image photographing apparatus according to claim 1, wherein:*

*the image photographing apparatus comprises a first camera unit (Main body with the Photographic lens 33) and a second camera unit (Flip unit with the second photographic lens 23, **Paragraphs 0203 and 0205**); and*

the fixing bracket (shutting axis 31), the hinge unit (part of the flip unit that houses the shaft), and the shaft member (rotation axis 32) for allowing rotational movement between the first and second camera unit (The main unit 10 and the flip unit 20 each have a camera housed in it. The main unit and flip unit are rotatable about each other).

*In regard to **Claim 24**, Shibata et al. teach of the hinge apparatus for rotatably connecting a housing with respect to a main body of an image photographing apparatus according to claim 23, wherein the first camera unit is a digital still camera (The first camera (lens 33) can be used to take still images, **Paragraph 0246**), and the second camera unit is a digital video camera (The second camera (lens 23) can be used to take moving images, **Paragraph 0246**).*

*With regard to **Claim 25**, Shibata et al. teach of the hinge apparatus for rotatably connecting a housing with respect to a main body of an image photographing apparatus according to claim 23, wherein the sensing unit determines one of a first operating mode that indicates a digital still camera mode, and a second operating mode that indicates a digital video camera mode (The sensing unit can detect what position the flip unit is in relation to the main body and automatically determine a mode/function to operate a digital still camera function or a digital video camera function, **Paragraphs 0248-0249**).*

Claims 1-4,8-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Takagi et al. (US Patent No.: 6226448B1)

*In regard to **Claim 1**, Takagi et al. teach of a hinge apparatus for rotatably connecting a housing (viewfinder 311 in Figure 14) with respect to a main body (main body cabinet 313 in Figure 14) of an image photographing apparatus (System is a VTR system, Column 7, Line 11) providing rotation of the housing in a predetermined rotation range (The housing can be rotated only as much as the flexible substrate 317 can be*

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*flexed, **Column 11, Lines 10 et seq. and Figure 14***), wherein the hinge apparatus comprises:

*a fixing bracket secured to the main body (Numbers 312 and 314 to 316 in Figure 14 make up the fixing bracket, **Figure 14**);*

*a hinge unit secured to the housing, and connected to the fixing bracket to be reciprocatingly rotatable within a predetermined angle (311a,b,312 and 322 make up the hinge unit secured to the housing (viewfinder 311) and connected to the fixing bracket 314, **Figures 14 and 17**);*

*a shaft member for rotatably connecting the hinge unit and the fixing bracket so that the hinge unit and the fixing bracket can rotate with respect to each other (318 and 318a-d make up the shaft member connecting the hinge unit and the fixing bracket so that the hinge unit and fixing bracket can rotate with respect to each other, **Figures 14-17**); and*

*a sensing unit disposed on at least one of the hinge unit and the fixing bracket to sense the relative rotational range of the hinge unit with respect to the fixing bracket (Flexible substrate 317 acts as a sensing unit disposed in the fixing bracket that senses the relative rotational range of the hinge unit with respect to the fixing bracket because the hinge unit can only turn as much as is allowed by the flexible substrate 317, **Column 11, Lines 10 et seq. and Figures 14-17**).*

Regarding **Claim 2**, Takagi et al. teach of the hinge apparatus for rotatably connecting a housing with respect to a main body of an image photographing apparatus according to claim 1, wherein the fixing bracket comprises:

a body having a first surface (Main body 313 has a first surface 314, **Figure 14**);
a first locking protrusion protruding from the first surface of the body for restricting the rotational movement of the hinge unit when the first locking protrusion is rotated with respect to the hinge unit (Leaf spring 312 protrudes from the first surface of the body and stops the camera portion at an arbitrary angle during rotation, **Column 10, Lines 30-43 and Column 11, Lines 1 et seq. and Figure 17**).

In regard to **Claim 3**, Takagi et al. teach of the hinge apparatus for rotatably connecting a housing with respect to a main body of an image photographing apparatus according to claim 1, wherein the fixing bracket further comprises:

a first rib protruding from the first surface at a radial distance different from that at which the first locking protrusion protrudes (315 protrudes from the first surface 314 and is at a radial distance different from 312, **Figure 14 and Figure 17**); and

a second rib protruding from the first rib, wherein said first and second rib being arranged to couple said fixing bracket to said hinge unit (316 protrudes from 315 and is arranged to couple said fixing bracket to hinge unit, **Figure 14 and Figure 17**).

With regard to **Claim 4**, Takagi et al. teach of the hinge apparatus for rotatably connecting a housing with respect to a main body of an image photographing apparatus according to claim 1, wherein the fixing bracket further comprises:

*a shaft hole for receiving the shaft member for rotatably connecting the hinge unit and the fixing bracket so that the hinge unit and the fixing bracket can rotate with respect to each other (See **Figures 14 and 17**).*

*Regarding **Claim 8**, Takagi et al. teach of the hinge apparatus for rotatably connecting a housing with respect to a main body of an image photographing apparatus according to claim 1, wherein the hinge unit comprises:*

*a hinge bracket fixed onto the housing (311a,b,312 and 322 are fixed onto housing 311, **Figure 14**);*

*a contact plate connected with the hinge bracket (The face of 313 is the contact plate, **Figure 14**); and*

*a plate spring disposed between the hinge bracket and the contact plate for urging the contact plate toward the fixing bracket (Leaf spring 312, **Figure 14 and Column 11, Line 1**).*

*In regard to **Claim 9**, Takagi et al. teach of the hinge apparatus for rotatably connecting a housing with respect to a main body of an image photographing apparatus according to claim 8, wherein the hinge bracket comprises:*

*a body, comprising a first surface (311a, **Figure 14**), a shaft hole for receiving the shaft member (322 in **Figure 14**) and an annular rib protruding from the first surface (The surface mounted to 311a with hole 311b, **Figure 14**).*

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Shibata et al. (US Pub No.: 2001/0004269A1)

*With regard to **Claim 4**, Shibata et al. teach of the hinge apparatus for rotatably connecting a housing with respect to a main body of an image photographing apparatus according to claim 1, wherein the fixing bracket (shutting axis 31) further comprises:*

*the shaft member for rotatably connecting the hinge unit and the fixing bracket so that the hinge unit and the fixing bracket can rotate with respect to each other (**Paragraph 0203 and Figures 1-3**). However, Shibata et al. do not specifically teach of a shaft hole for receiving the shaft member. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a shaft hole into the fixing bracket to secure the shaft member because this is a common and well-known way of securing a shaft and a shaft hole would provide a secure placement of the shaft in the fixing bracket.*

Claims 15-19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takagi et al. (US Patent No.: 6226448B1) as applied to claim 1 above, and further in view of Ichiyoshi et al. (US Patent No.: 5043822)

*In regard to **Claim 15**, Takagi et al. teach of the hinge apparatus for rotatably connecting a housing with respect to a main body of an image photographing apparatus according to claim 1 as taught above. However, Takagi et al. do not teach that the hinge apparatus for rotatably connecting a housing with respect to a main body of an image photographing apparatus according to claim 1, further comprises: a click force providing unit disposed between the fixing bracket and the contact plate for providing a predetermined indication at predetermined intervals during the rotation of the housing with respect to the body. Ichiyoshi et al. teach of click force providing unit (12a-12f) dispersed between a fixing bracket and a contact plate, **Figure 12 and Column 7, Lines 25 et seq. of Ichiyoshi et al.** It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate into the teachings of Takagi et al. a click force providing unit between the fixing bracket and contact plate so that the user will know if one casing (viewfinder) is adjusted accurately and optimally in correspondence with the other casing (camera).*

*With regard to **Claim 16**, Takagi et al. and Ichiyoshi et al. disclose the hinge apparatus for rotatably connecting a housing with respect to a main body of an image photographing apparatus according to claim 15, wherein the click force providing unit comprises:*

*a click plate connected to the fixing bracket (Click plate 12b, **Figure 12 of Ichiyoshi et al.**); and*

*at least one click ball arranged between the click plate and the contact plate for providing the predetermined indication (Click balls 14 in **Figure 12 of Ichiyoshi et al.**).*

*Regarding **Claim 17**, Takagi et al. and Ichiyoshi et al. disclose the hinge apparatus for rotatably connecting a housing with respect to a main body of an image photographing apparatus according to claim 16, wherein the click plate further comprises:*

*a plurality of click balls (There are more than one click balls (14) present as shown in **Figure 12 of Ichiyoshi et al.**).*

*With regard to **Claim 18**, Takagi et al. and Ichiyoshi et al. disclose the hinge apparatus for rotatably connecting a housing with respect to a main body of an image photographing apparatus according to claim 16, wherein the click plate includes metal (The balls that are in the click plate are metal, **Column 7, Line 53 of Ichiyoshi et al.**).*

*In regard to **Claim 19**, Takagi et al. and Ichiyoshi et al. disclose the hinge apparatus for rotatably connecting a housing with respect to a main body of an image photographing apparatus according to claim 16, wherein the click plate further comprises:*

*a plurality of click holes formed at predetermined angles with respect to the first axis (12c in **Figure 12 of Ichiyoshi et al.**).*

*With regard to **Claim 21**, Takagi et al. and Ichiyoshi et al. do not specifically disclose the hinge apparatus for rotatably connecting a housing with respect to a main*

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body of an image photographing apparatus according to claim 16, wherein the click plate further comprises:

a guide groove for guiding the click balls to roll between the click holes. However, official notice is taken saying it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate guide grooves for guiding the click balls to roll between the click holes so that the balls would not swivel out of place.

Allowable Subject Matter

Claims 5-7,10-14,20 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pritham Prabhakher whose telephone number is 571-270-1128. The examiner can normally be reached on M-F (7:30-5:00) Alt Friday's Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571)272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Pritham . D. Prabhakher

A handwritten signature in black ink, appearing to read 'David Ometz', with a horizontal line extending to the right.

DAVID OMETZ
SUPERVISORY PATENT EXAMINER